The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte WILLIAM P. CRAMER

Appeal No. 2006-2909
Application 10/056,494
Technology Center 3600

ORDER AND ERRATUM

On March 29, 2007, a Decision and Remand was rendered by the Board of Patent Appeals and Interferences (Board) and mailed to Appellant. In the Remand portion on page 11, the Board referenced an article to "Pipeline and Appurtenances," *Policies for Accommodations of Utilities on Highway Right of Way*, Transportation Research Board, pp. 4-8, © 1976. It has come to the

attention of the Board that the article was erroneously not attached with the decision.

Therefore, the March 29, 2007 "Decision and Remand" is hereby being replaced by the Decision and Remand mailed herewith. All time periods for taking and subsequent action in connection with this appeal are to be calculated based on the date of the Decision mailed herewith. Any confusion caused by the inadvertent error by the Board in the earlier "Decision" is regretted.

By Order of the

BOARD OF PATENT APPEALS
AND INTERFERENCES

By: _____

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WILLIAM P. CRAMER

Appeal 2006-2909
Application 10/056,494
Technology Center 3600

Decided: March 29, 2007
Remailed: April 16, 2007

Before EDWARD C. KIMLIN, BRADLEY R. GARRIS, and CATHERINE Q. TIMM, *Administrative Patent Judges.*

GARRIS, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellant appeals the final rejection of claims 1, 2, and 4-6 under 35 U.S.C. § 134. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b).

We AFFIRM-IN-PART and REMAND.

Appellant invented a process for providing an intercontinental power grid distribution system using the interstate highway system and state

lines (Specification 1). The supply lines may be placed below ground in the median and in right-of-ways adjacent both sides of the highway (Specification 1-2). The supply lines may include petroleum, gas, electricity and fiber optics (Specification 2). Appellant states the advantages of such an intercontinental power grid distribution system include protecting the power grid from terrorist attacks and the ability to quickly repair any breaks in the system (Specification 6).

Claims 1, 4, and 5 are illustrative:

> 1. A process for providing an intercontinental power grid distribution system using the interstate highway system for the mass distribution of energy products including petroleum, comprising
>
> placing a petroleum pipeline below the ground surface of the median of an interstate highway, the interstate highway selected from the group consisting of interstate highways of the United States extending generally in an east-west direction and interstate highways of the United [S]tates extending generally in a north-south direction, continuing the petroleum pipeline longitudinally of the interstate highway median and below ground in the median throughout a major portion of the length of the interstate highway, from a refinery to a distribution center,
>
> connecting the petroleum pipeline to a source of petroleum,
>
> connecting the petroleum pipeline to an outlet line extending at an angle below the ground for supplying distributors and end users with petroleum.
>
> 4. A process for providing an intercontinental power grid system using the interstate highway system for the mass distribution of energy products including petroleum, gas, electricity, gasoline and fiber optics, comprising
>
> placing energy product supply lines below the surface of the ground of the interstate highway right-of-ways immediately adjacent

the interstate highway, the interstate highway selected from the group consisting of interstate highways of the United States extending generally in an east-west direction and interstate highways of the United States extending generally in a north-south direction, continuing the product supply lines longitudinally of the right-of-ways of the interstate highways and below the surface of the right-of-ways throughout a major portion of the length of the interstate highway, from a source of energy product to a distribution center[,]

connecting each supply line to a source of an energy product,

connecting each supply line to an outlet line located below the ground and at an angle relative to a supply line.

5. The process as defined in Claim 4 wherein the energy product is petroleum, providing pumping stations for each petroleum supply line and interconnecting each petroleum supply line to a pumping station for maintaining the pressure in the petroleum supply line.

The Examiner relies on the following prior art references as evidence of unpatentability:

Diamond, David, "Building the Future-Proof Telco," *Wired* Magazine website, pp. 1 and 4, May 1998 (hereinafter "Diamond").

Colonial Pipeline Company Website, "Terminalling Services", "About Us" and "System Map" sections of the website, November 21, 2000 (hereinafter "Colonial Pipeline").

U.S. Department of Transportation, Federal Highway Administration website, Chapter 1, "Utility Relocations, Adjustments and Reimbursement", pp. 1, and 23-24, January 2001 (hereinafter "FHWA").

The rejections as presented by the Examiner are as follows:

1. Claims 1, 2, and 4-6 are rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over the Colonial Pipeline.
2. Claims 1, 2, and 4-6 are rejected under 35 U.S.C. § 102(b) as being anticipated by the FHWA.
3. Claims 4 and 6 are rejected under 35 U.S.C. § 102(b) as being anticipated by Diamond.

Rather than reiterate the respective positions advocated by the Appellant and by the Examiner concerning these rejections, we refer to the Brief and the Reply Brief, and to the Answer respectively for a complete exposition thereof.

OPINION

35 U.S.C. § 102(b) REJECTION OVER COLONIAL PIPELINE

Appellant separately argues independent claims 1 and 4 with regard to the rejection over Colonial Pipeline. Accordingly, we address Appellant's arguments with respect to those claims below.

Regarding claim 1, Appellant argues that in Colonial Pipeline "'the pipeline' is not positioned underground in the median of an interstate highway for a major portion of the length of the interstate highway" (Br. 4). Regarding claim 4, Appellant contends that in Colonial Pipeline "'the pipeline' is not positioned underground in the right-of-way of an interstate highway for a major portion of the length of the interstate highway" (Br. 4).

The Examiner contends that since Colonial Pipeline discloses an underground pipeline with terminal cities, "it is possible and is capable of laying pipeline in the median of an interstate highway system" (Answer 5).

We cannot sustain the Examiner's § 102(b) rejection over Colonial Pipeline.

Colonial Pipeline discloses that it has over 5,300 miles of underground pipeline for transporting gasoline, kerosene, diesel fuels and home heating oil (Colonial Pipeline "Terminalling Services"). However, Colonial Pipeline does not disclose placing the pipeline "below the ground surface of the median of an interstate highway" (claim 1) or "below the surface of the ground of the interstate highway right-of-ways immediately adjacent the interstate highway" (claim 4).

Because a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference, we reverse the Examiner's § 102(b) rejection of independent claims 1 and 4, and dependent claims 2, 5, and 6 over Colonial Pipeline. *Verdegaal Bros., Inc. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

35 U.S.C. § 103(a) REJECTION OVER COLONIAL PIPELINE

The Examiner rejected claims 1, 2 and 4-6 under § 103(a) over Colonial Pipeline. The Examiner concluded that "it would have been [an] obvious matter of design choice to one of ordinary skill in the art to place a pipeline under the median of a highway, since doing [so] would facilitate laying out of the pipeline from a 'point a' to a 'point b'" (Answer 4).

Appellant argues that "there is no disclosure or suggestion in the Colonial Pipeline Company documents [i.e., Colonial Pipeline] of placing a pipeline under the median of an interstate highway to extend longitudinally of the highway for a major portion of the length of the highway" (Br. 6-7). Appellant further argues that none of the prior art suggests placing a pipeline below the ground surface of the median of an interstate highway as a design choice (Br. 7).

The Examiner responds that laying pipelines above or below ground is well known in the art (Answer 5). Accordingly, the Examiner continues, "in a scenario where economical and environmental studies are positive, and all permissions and land rights are obtained, a pipeline may be laid anywhere, including the median of a[n] interstate highway" (Answer 5).

We cannot sustain the Examiner's § 103(a) rejection over Colonial Pipeline.

The Examiner bases his obvious conclusion on his determination that placing a pipeline under the median of a highway is an "obvious matter of design choice" (Answer 4). However, the Examiner's determination is without evidentiary support. Colonial Pipeline does not disclose placing a pipeline "below the ground surface of the median of an interstate highway" (claim 1) or "below the surface of the ground of the interstate highway right-of-ways" (claim 4). In fact, Colonial Pipeline contains no disclosure of where the "underground pipeline" is located relative to an interstate highway so as to suggest placing the pipe line below the median or below the ground in the interstate highway right-of-ways. *In re Royka*, 490 F.2d 981, 985, 180 USPQ 580, 583 (CCPA 1974) (explaining to establish prima facie

obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art).

We reverse the § 103(a) rejection of independent claims 1 and 4, and dependent claims 2, 5, and 6 over Colonial Pipeline.

35 U.S.C. § 102(b) REJECTION OVER FHWA

Claims 1, 4 and 5 were argued separately by Appellant. Accordingly, we address the arguments made with respect to those claims in our discussion below.

CLAIMS 1 AND 5

Appellant argues that FHWA fails to disclose or suggest a petroleum pipeline located in an interstate highway median and extending longitudinally thereof (Br. 8). Appellant contends that, since FHWA does not disclose a petroleum pipeline using the highway median as a route, the rejection of independent claim 1 and dependent claim 5 (which depends from claim 4) is clearly erroneous (Br. 8).

The Examiner responds that FHWA discloses burying pipelines for aesthetic reasons (Answer 5). The Examiner states that though "FHWA does not disclose an oil pipeline, it discloses utility pipelines and the oil pipeline is read as a utility pipeline" (Answer 5-6).

We cannot sustain the Examiner's § 102(b) rejection of claims 1 and 5 over FHWA.

FHWA does not disclose a petroleum supply line at all much less one which is "below the surface of the ground of the interstate highway right-of-ways immediately adjacent the interstate highway" (claim 5, via its

dependence on claim 4). Similarly, since FHWA does not disclose a petroleum pipeline at all, it does not disclose "placing a petroleum pipeline below the ground surface of the median of an interstate highway" (claim 1). A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal*, 814 F.2d at 631, 2 USPQ2d at 1053.

From the foregoing, we cannot sustain the § 102(b) rejection of independent claim 1, dependent claim 2 (which depends from claim 1) or dependent claim 5 over FHWA.

CLAIM 4

Appellant argues that FHWA does not disclose "placing . . . any energy product supply line in an interstate highway right-of-way and extending the energy supply line a major length of the interstate highway" (Br. 8). Appellant contends that there is no indication that FHWA's disclosed "utility pipe culverts or box culverts would extend the major length of an interstate highway" (Br. 8).

We agree with the Examiner's ultimate finding that claim 4 is anticipated by FHWA.

Generally, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal*, 814 F.2d at 631, 2 USPQ2d at 1053. A reference disclosing a limited class will anticipate a claim to a member falling within the limited class when each member of the limited class is at once envisaged from the reference's disclosure. *In re Petering*, 301 F.2d 676, 681, 133 USPQ 275, 280 (CCPA 1962). The reference need not "spell

out the limited class" to anticipate. *Id. See also, In re Sivaramakrishnan*, 673 F.2d 1383, 1384, 213 USPQ 441, 442 (CCPA 1982); *In re Schaumann*, 572 F.2d 312, 315, 197 USPQ 5, 8 (CCPA 1978).

Appellant does not dispute that FHWA discloses placing utility tunnels (and utility supply lines therein) adjacent the edge of the freeway (i.e., along interstate right-of-ways) (Br. 8). Rather, Appellant's only argued distinction is that FHWA does not disclose the "utility pipe culverts or box culverts would extend the major length of an interstate highway" (Br. 8).

We are unpersuaded by Appellant's argument that FHWA does not disclose placing the utility tunnels along a major length of the interstate (Br. 8). Based upon FHWA's disclosure of placing utility tunnels (and the utility supply lines therein) along the right-of-ways of the interstate, there are only two possible embodiments for such placement: the utilities extend throughout either a major or a minor portion of the length of the interstate highway. In view of the limited class of embodiments (i.e., a major or minor highway length) one of ordinary skill in the art would have immediately envisaged each embodiment (i.e., a major or minor highway length) of the limited class, such that FHWA's disclosure anticipates Appellant's claim. *Petering*, 301 F.2d at 681, 133 USPQ at 280.

Having determined Appellant's only argued distinction of claim 4 is disclosed by FHWA, we sustain the Examiner's § 102(b) rejection of argued claim 4 and non-argued claim 6 (which depends from claim 4) over FHWA.

35 U.S.C. § 102(b) REJECTION OVER DIAMOND

Appellant separately argues claim 4. Accordingly, we address Appellant's arguments with respect to claim 4 below.

Claims 4 and 6 are rejected under § 102(b) as being anticipated by Diamond.

Appellant's only argued distinction is that Diamond fails to disclose placing the "fiber optic cables . . . in the right-of-way . . . [to] extend a major portion of the length of the interstate" (Br. 8).

Diamond discloses that the fiber optic cables are positioned underground and along the interstate highways where the right-of-ways are leased from the transportation authorities (Diamond 4). Plainly, from such disclosure, Diamond's fiber optic cables are positioned in the right-of-ways along the interstate highways.

We are unpersuaded by Appellant's argument that Diamond does not disclose placing the fiber optic cables along a major length of the interstate. From Diamond's disclosure of placing fiber optic cables along the right-of-ways of the interstate, there are only two possible embodiments for such placement. Either the fiber optic cables extend throughout a major or a minor portion of the length of the interstate highway. Analogous to our reasoning above, in view of the limited class of embodiments (i.e., a major or minor highway length) one of ordinary skill in the art would have immediately envisaged each embodiment (i.e., major or minor highway length) of the limited class, such that Diamond's disclosure anticipates Appellant's claim. *Petering*, 301 F.2d at 681, 133 USPQ at 280.

Having determined Appellant's only argued distinction of claim 4 is disclosed by Diamond, we sustain the Examiner's § 102(b) rejection of argued claim 4 and non-argued claim 6 (which depends from claim 4) over Diamond.

REMAND

Claims 1 and 4 appear to be unpatentable under §§ 102(b)/103(a) over "Pipeline and Appurtenances," *Policies for Accommodation of Utilities on Highway Right-of-Way*, Transportation Research Board, pp. 4-8, © 1976 (hereinafter Pipeline and Appurtenances).

Pipeline and Appurtenances discloses that Hawaii permits laying a longitudinally extending pipeline below the ground surface of the median or shoulder (i.e., right-of-way) of highways (Pipeline and Appurtenances 4, 5). Pipeline and Appurtenances also appears to disclose that pipelines may include petroleum pipelines (Pipeline and Appurtenances 4). The claim features of connecting the pipeline to a source of petroleum (claim 1) or "a source of an energy product" (claim 4), and connecting the pipeline to an outlet line extending at an angle below the ground for supplying distributors and end users with petroleum appear to be inherent or obvious features. These features seem to be inherent because a pipeline needs to be connected to a source of the material it will be conveying and an underground main pipeline necessarily must have underground branches that supply end users in order for the pipeline to function.

In the alternative, it appears that it would have been obvious at the time the invention was made to one having ordinary skill in the art to modify Pipeline and Appurtenances' pipeline to include connecting the pipeline to a source of petroleum (claim 1) or "a source of an energy product" (claim 4), and connecting the pipeline to an outlet line extending at an angle below the ground for supplying distributors and end users with petroleum because a pipeline needs to be connected to a source of the material it will be conveying and an underground main pipeline must have underground

branches that supply end users in order for the pipeline to function as intended in the reference.

Regarding the claim feature that the pipeline extends "throughout a major portion of the length of the interstate highway" (claim 1 and claim 4), we note that from the Pipeline and Appurtenances' disclosure to place pipelines in the median or shoulder (i.e., the right-of-ways) of the interstate, there are only two possible embodiments for such placement: the pipeline extends throughout either a major or a minor portion of the length of the interstate highway. In view of the limited class of embodiments (i.e., a major or minor highway length) one of ordinary skill in the art would have immediately envisaged each embodiment (i.e., a major or minor highway length) of the limited class, such that Pipeline and Appurtenances' disclosure appears to anticipate Appellant's claims. *Petering*, 301 F.2d at 681, 133 USPQ at 280.

Claims 2 and 5 appear to be unpatentable under § 103(a) over "Pipeline and Appurtenances," *Policies for Accommodation of Utilities on Highway Right-of-Way*, Transportation Research Board, pp. 4-8, © 1976 (hereinafter Pipeline and Appurtenances) in view of Hayward US 3,870,063.

As noted above Pipeline and Appurtenances appears to disclose all the features of Appellant's independent claims 1 and 4. However, Pipeline and Appurtenances does not disclose "providing pumping stations for each petroleum pipeline and interconnecting each petroleum pipeline to a pumping station for maintaining the pressure in the petroleum pipeline" (claim 2 and 5).

Hayward discloses that it was known to have pumping stations at various intervals along the pipeline to maintain the proper pressure and flow

of the petroleum (Hayward, col. 2, ll. 3-15). It appears that it would have been prima facie obvious at the time the invention was made to one of ordinary skill in the art to combine Hayward's pumping stations with Pipeline and Appurtenances' underground pipeline in order to maintain the proper flow and pressure of the petroleum flowing through the pipeline as taught by Hayward (col. 2, ll. 3-15).

Therefore, in response to this Remand, the Examiner must determine, and make of record the following results of his determination: (1) the propriety of rejecting at least claims 1 and 4 under 35 U.S.C. § 102(b)/103(a) as being unpatentable over Pipeline and Appurtenances, and (2) the propriety of rejecting at least claims 2 and 5 under 35 U.S.C. § 103(a) over Pipeline and Appurtenances in view of Hayward.

This Remand to the Examiner pursuant to 37 C.F.R. § 41.50(a)(1) (2006) is ***not*** made for further consideration of a rejection. Accordingly, 37 C.F.R. § 41.50(a)(2) (2006) does not apply.

DECISION

The Examiner's rejections of claims 1, 2, and 4-6 under §§ 102(b)/103(a) over Colonial Pipeline are REVERSED.

The Examiner's rejection of claim 1, 2, and 5 under § 102(b) over FHWA is REVERSED.

The Examiner's rejection of claims 4 and 6 under § 102(b) over FHWA is AFFIRMED.

The Examiner's rejection of claims 4 and 6 under § 102(b) over Diamond is AFFIRMED.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2006).

AFFIRMED-IN-PART & REMANDED

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